Breast Cancer Prevention Behavior among Women of Reproductive Age: Knowledge, Attitude, and Family Support

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Abstract -- *Breast cancer is the leading cause of cancer deaths among women. Many breast cancer patients come to health services at an advanced stage. Most women of reproductive age in some countries have not done breast cancer prevention due to various factors. This study aims to identify the correlation of knowledge, attitude, and family support with breast cancer prevention behavior. A cross-sectional approach was carried out on 110 women of reproductive age in the Pacar Keling Community Health Center, Surabaya, selected by cluster sampling. The inclusion criteria were women 15 – 49 years who live together with their family. The exclusion criteria were women   diagnosed with breast tumors or breast cancer. The independent variables were knowledge, attitude, and family support. The dependent variable was breast cancer prevention behavior. Data were collected using questionnaires. The data analysis was using statistic test Spearman's rho ($\alpha \leq 0.05$). There was a correlation between knowledge ($p = 0.002$, $r = 0.290$), attitude ($p = 0.004$, $r = 0.271$), and family support ($p = 0.001$, $r = 0.326$) with breast cancer prevention behavior. Prevention of breast cancer in women of reproductive age can be done optimally if they have good knowledge and positive attitude. Family support is a reinforcing factor so that prevention of breast cancer in women of reproductive age can be done consistently*

Keywords-- *Attitude, Breast Cancer Prevention, Family Support, Knowledge, Women of Reproductive Age*

I. INTRODUCTION

Breast cancer is the most frequent cancer among women, impacting 2.1 million women each year, and also causes the greatest number of cancer-related deaths among women. In 2018, it is estimated that 627,000 women died from breast cancer [1]. Data from GLOBOCAN 2018 show that, in Indonesia, there were 58,256 new cases of breast cancer with a mortality rate of 22,692 [2]. There is an early breast cancer detection program as a preventive measure to find out early the presence of breast cancer, but the incidence of breast cancer is still high. Most women of reproductive age still rarely do Breast Self-Examination (BSE) with various factors influencing this [3].

Prevention of breast cancer has an important role. Changes in behavior, as well as greater awareness of women about breast cancer, can contribute to reducing the incidence of breast cancer. Another important aspect that needs attention is the number of women undergoing early detection [4]. In an effort to overcome cancer, the government has implemented an early breast cancer detection program with Breast Self-Examination (BSE) and Clinical Breast Examination, but the

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interest of women of childbearing age to do so is still low. This condition increases the number of breast cancer patients who first come to health facilities for treatment having entered stage III-IV (advanced stage) by 60-70% in Indonesia [5].

The prevalence of breast cancer can be suppressed by increasing the level of prevention behavior. Prevention of breast cancer can be done by routine health checks, eliminating cigarette smoke, routine physical activity, a healthy diet with balanced nutrition, regular breaks and stress management [6]. Breast cancer prevention behavior can be seen more deeply through internal factors (within oneself) and external factors (environmental factors). At present, there is still limited research on factors related to breast cancer prevention behavior by looking at internal and external factors. This research aims to identify the correlation of knowledge, attitude, and family support with breast cancer prevention behavior among women of reproductive age.

AI. METHODOLOGY

- Design

This research was conducted by cross-sectional design. Cross-sectional research is a type of research that emphasizes the measurement of variable data only once at a time [7].

- Population, Sample and sampling

The population in this study was women of childbearing age aged 15-49 years. The sample in this study was that of women of reproductive age with inclusion and exclusion criteria. Inclusion criteria in this study are women of reproductive age (15-49 years) and women who live with family. The exclusion criteria are women who have been diagnosed with breast tumors or breast cancer. The sampling technique used in this study is the cluster sampling type probability technique. The number of respondents in this study was 110 respondents, who were adjusted to the inclusion criteria.

- Variables

The independent variables used in this study are knowledge, attitudes, and family support. The dependent variable used in this study is the prevention of breast cancer in women of reproductive age.

- Instrument

The instrument used in this study was a questionnaire consisting of demographic data, knowledge, attitudes, family support and breast cancer prevention behavior. The demographic data questionnaire consisted of age, marital status, education, and occupation. The knowledge questionnaire results from modifications from previous studies [8] which have been tested and have reliability with r table = 0.456 r count = 0.492-0.656 and Cronbach's alpha value 0.860. The assessment is done using the Guttman scale, consisting of 10 questions with six parameters, namely know, comprehension, application, analysis, synthesis and evaluation.

Attitude questionnaire results from modifications from previous studies [8] which have been tested for validity and reliability with r table = 0.456 r count = 0.514-0.758 and Cronbach's alpha 0.871. Assessment is carried out using a Likert scale, consisting of 10 questions with four parameters, namely accepting, responding, respecting and being responsible.

The family support questionnaire was tested for validity and reliability with r table = 0.456, r count = 0.646-0.751 and Cronbach's alpha 0.919. The assessment was carried out using a Likert scale, consisting of 10 questions with four parameters namely emotional support, appreciation support, instrumental support and informational support.

The breast cancer prevention behavior questionnaire was adapted from previous studies [9] and validity and reliability tests have been done with r table = 0.456, r count = 0.487-0.846 and Cronbach's alpha 0.901. The questionnaire uses a Likert scale, consisting of eight questions with six parameters namely periodic health checks, eliminate cigarette smoke, routine physical activity , a healthy diet, adequate rest and manage stress.

- Research procedure

Researchers coordinated with village midwives and cadres to conduct a sampling frame by selecting respondents randomly according to inclusion and exclusion criteria in Pacarkeling village. Data were collected at posyandu activities and at the cadre's home. Posyandu is an abbreviation of Pos Pelayanan Terpadu or Integrated Service Post, which originally functioned as family planning and health services at grassroots level. ... One of those programs is the strengthening and revitalization of community service centers

The researcher explained the purpose and procedure of the research and asked for approval from the respondent. Respondents who   agreed to join the research signed an informed consent and were given an explanation of how to fill out the questionnaire. After the questionnaire was completed, the questionnaire was returned to the researcher and re-examined by the researcher.

- Data analysis

Analysis of the data used   the Spearman Rank Correlation statistical test with significance level $\alpha \leq 0.05$. Spearman statistical test was used to find out whether knowledge, attitudes and family support related to breast cancer prevention behavior.

- Ethical Clearance

This research   conducted an ethics test on May 13, 2019.at the Faculty of Nursing of Health Research Ethics Commission with number: 1400-KEPK

BI. RESULTS

Most of the women were with age 26-35 years (n=46, 41.8%). More than three-quarters of women of reproductive age (n=86, 78.2%) were married. Most of the women in the study finished senior high school (n=64, 58.2%). Two-thirds of the women (n=74, 67.3%) had occupation as housewives (Table 1).

Table 1. Socio-Demographic Characteristics (N=110)

Characteristics	Criteria	n	%
Age	15-16 years	1	0.9
	17-25 years	21	19.1
	26-35 years	46	41.8
	36-45 years	25	22.7
	46-49 years	17	15.5
Marital status	Unmarried	22	20
	Married	86	78.2
	Divorced	2	1.8
Educational status	Not completed in elementary school	5	4.5
	Elementary	9	8.2
	Junior high school	15	13.6
	Senior high school	64	58.2
	University	17	15.5
Occupational status	Government employees	1	0.9
	Private employees	19	17.3
	Housewife	74	67.3
	Trader	7	6.4
	College student	8	7.3
	Student	1	0.9

Table 2 Item scores of knowledge and attitude

	Item	Mean ± SD
Knowledge	The usefulness of BSE	0.72 ± 0.45
	Avoid cigarette smoke	0.46 ± 0.50
	Physical activity	0.70 ± 0.46
	Avoid stress	0.71 ± 0.46
	Get enough rest	0.78 ± 0.41
	Time to do BSE	0.55 ± 0.50
	Healthy food (vegetables and fruit)	0.74 ± 0.44
	Groups of people doing BSE	0.59 ± 0.49
	Benefits of BSE	0.62 ± 0.49
	Sign of breast cancer	0.45 ± 0.50
Attitude	Be aware of breast cancer	3.35 ± 0.58
	Need to prevent breast cancer	2.87 ±0.61
	Avoiding cigarette smoke	3.35 ±0.66
	When doing BSE	2.95 ±0.47
	Doing BSE	3.02 ±0.43
	Take some time off	2.82 ±0.54
	Take the time to exercise	2.85 ±0.62
	To consume healthy food (vegetables and fruit)	3.15 ±0.59
	Check the health if find a problem	2.97 ±0.53
	Keep doing BSE even if don't find a lump	2.72 ±0.69

Table 3. Item scores of family support and breast cancer prevention behavior

	Item	Mean ± SD
Family support	Providing motivation	2.57 ± 0.77
	Family assistance when health check	3.27 ± 0.75
	Remind to BSE	1.95 ± 0.90
	Discuss about prevention	2.54 ± 0.87
	Give praise	2.62 ± 0.82
	Provide special funds	2.87 ± 0.94
	Look for health facilities	2.66 ± 0.82
	Awareness not to smoke	3.47 ± 0.66
	Looking for breast cancer information	2.85 ± 0.77
	Find out the health check schedule	1.72 ± 0.92
Breast cancer prevention behavior	Doing BSE	2.02 ± 0.93
	Avoiding cigarette smoke	3.43 ± 0.58
	Regular exercise	2.09 ± 0.95
	Avoiding alcohol consumption	3.88 ± 0.32
	Avoid unhealthy foods	3.08 ± 0.74
	Consumption of vegetables and fruit	3.35 ±0.61
	Get enough rest	2.95 ±0.81
	Looking for problem solving	3.13±0.78

Table 4 The relationship between knowledge, attitude, and family support with breast cancer prevention behavior (n=110)

Variable	Category	Breast cancer prevention behavior				Total		Significance
		Less		Good				
		n	%	n	%	N	%	
Knowledge	less	31	28.2	12	10.9	43	39.1	ρ = 0.002
	enough	15	13.6	21	19.1	36	32.7	r = 0.290
	good	12	10.9	19	17.3	31	28.2	
	negative	38	34,5	20	18,2	58	52.7	ρ = 0.004
Attitude	positive	20	18.2	32	29.1	52	47.3	r = 0.271
Family support	less	39	35.5	18	16.4	57	51.8	ρ = 0.001
	good	19	17.3	34	30.9	53	48.2	r = 0.326
	Total	58	52,7	52	47,3	110	100	

Of the ten knowledge statements 'Get enough rest' achieved the highest average score (0.78 ± 0.41) and 'sign of breast cancer' achieved the lowest average (0.45 ± 0.50). Of the ten attitude statements, of the six perceived benefit statements,

'Be aware of breast cancer and avoiding cigarette smoke' achieved the highest average score (3.35 ± 0.58) and 'Keep doing BSE even if don't find a lump' achieved the lowest average (2.72 ± 0.69) (Table 2).

Of the ten family support statements, 'awareness not to smoke' achieved the highest average score (3.47 ± 0.66) and 'Find out the health check schedule' achieved the lowest average (1.72 ± 0.92). Of the eight breast cancer prevention behavior statements, 'Avoiding alcohol consumption' achieved the highest average score (3.88 ± 0.32) and 'Doing BSE' achieved the lowest average (2.02 ± 0.93) (Table 3).

The highest number of respondents was found in respondents who had family support in the less category and had breast cancer prevention behavior in the less category with 39 (35.5%) respondents. There is a relationship of knowledge with breast cancer prevention behavior (p = 0.002) and r = 0.290, meaning that the relationship of knowledge with breast cancer prevention behavior is low correlated and (positive) linear directional. There is a relationship of attitude with breast cancer prevention behavior (p = 0.004) and r = 0.271, meaning that the relationship of attitude with breast cancer prevention behavior is low correlated and (positive) linear directional. There is a relationship of family support with breast cancer prevention behavior (p = 0.001) and r = 0.326, meaning that the relationship of attitude with breast cancer prevention behavior is moderate correlated and (positive) linear directional (Table 4).

IV. DISCUSSION

This study shows that there was a correlation between knowledge, attitude, and family support with breast cancer prevention behavior. There is a correlation between knowledge with breast cancer prevention behavior in women of reproductive age with low and (positive) linear directional. Most women have less knowledge and behaviors to prevent breast cancer. The formation of behavior requires knowledge because it is a very important domain to shape it [10]. Lawrence Green also revealed that knowledge is one of the predisposing factors that can influence one's health behavior [11]. Based on previous research, it is shown that knowledge has a relationship to breast cancer prevention behavior. Someone who does not receive good knowledge cannot do breast cancer prevention behavior, such as not doing early detection of breast cancer using breast self-examination and not avoiding risk factors that can increase the occurrence of breast cancer [12]. Lack of knowledge about the risk of this disease can cause misperceptions in preventing breast cancer, especially in groups at risk [13]. Risk groups will be very helpful if they have a good understanding of knowledge related to it.

This research shows that most women have less knowledge and breast cancer prevention behaviors. Most women still lack knowledge due to the lack of information exposure about breast cancer prevention in the working area of the Pacarkeling Health Center. A research concluded that lack of knowledge is the most important factor in preventing someone from making efforts to prevent breast cancer [14]. Providing correct information regarding breast cancer prevention for high-risk groups can reduce their false beliefs about it. The level of education of women did not significantly influence the level of knowledge of women of childbearing age about breast cancer prevention behavior. This might illustrate that knowledge is not absolutely obtained from formal education, but can be obtained from non-formal education. Someone with a low level of education does not mean absolutely low knowledge and someone with a high level of education does not mean absolutely well-informed [15]. Based on the data obtained, the majority of women have less knowledge about the signs and symptoms of breast cancer. This is because women are limited to knowing that breast cancer is only marked by a lump, even though there are still many other signs and symptoms of breast cancer. Knowledge

can change a person's behavior to behave better, for example, in implementing health behaviors. This can be applied to conditions such as breast cancer prevention behavior' a person must increase their knowledge in order to be able to perform breast cancer prevention behavior optimally so that it can improve the quality of life.

The results showed the correlation between attitude with breast cancer prevention behavior in women of reproductive age and had low and (positive) linear directional. Most women have less attitude and breast cancer prevention behavior. A research defines attitude as a subjective assessment of a person against an object [16].   Green revealed that attitude is one of the predisposing factors that can influence one's health behavior [11]. Based on previous research, attitude has a relationship to a breast cancer prevention behavior [17]. Positive attitude that is owned can encourage someone to continue to conduct breast cancer prevention behavior. A positive attitude can increase optimism about health interventions that will be effective and can have long-term benefits [18]. Other study found that attitudes are related to health behaviors of breast cancer prevention in women [19]. It is so important to identify and educate the public regarding breast cancer risk factors and their prevention so that individuals can combine sustainable attitudes and better lifestyle changes.

This study found that most women still have a negative attitude toward breast cancer prevention behavior. Women have a negative attitude because they have a perception that, if they feel healthy, they don't need to do BSE as an effort to prevent disease. Women mostly did not take advantage of Clinical Breast Examination; they felt they did not need to check themselves because they did not have complaints on their breasts. This study showed that the majority of women have a negative attitude about not going to do BSE again if they do not find a lump in the previous examination. This is because the process of doing BSE requires high discipline, because it must be routinely carried out every month. A positive attitude can influence someone to perform health behaviors better. This can be applied to breast cancer prevention behavior. A woman must have a positive attitude in order to be able to perform breast cancer prevention behavior optimally.

The results showed the correlation between family support and breast cancer prevention behavior with moderate and (positive) linear directional. Most women have less family support with less breast cancer prevention behavior. This shows that breast cancer prevention behavior is influenced by family support. Green revealed that family support is one of the reinforcing factors that can affect one's health behavior [11]. Based on another research, it showed that family support has a relationship to a breast cancer prevention behavior [20]. Lack of family support will make women not enthusiastic about breast cancer prevention behavior. Other study found that family support has become an important means of reducing difficulties among people living at risk of breast cancer [21]. Family support helps individuals who face crisis to overcome it and better manage their difficult lives. Family support related to health will be able to improve their quality of life and change better health behaviors [22].

Women have less family support because the family does not know about breast cancer prevention behavior so they cannot participate in helping women to prevent it. A research found that family support felt by someone will be able to change one's behavior for the better [23]. This study showed that the majority of women have less family support about providing informational support in the form of a health check schedule for women of childbearing age in their families to do BSE. The majority of families know less about early detection of breast cancer using BSE, which must be done by every woman. so that they are unable to provide informational support. Family support can influence one's behavior to

behave better for implementing health behaviors. Limitations in this study are the time of research in the fasting month, so researchers had difficulty in arranging the time of meeting with respondents.

V. Conclusion

Knowledge, attitude and family support are related to breast cancer prevention behavior. Women's knowledge about the early signs and symptoms of breast cancer will encourage breast cancer prevention behavior. A good attitude is characterized by women who will continue to do BSE and Clinical Breast Examination even though they do not feel complaints on the breasts. Family support by providing information about the importance of early detection will improve women's behavior in preventing breast cancer

Health workers need to provide health education about the importance of conducting BSE and clinical breast examinations. Health education needs to involve families so that they can provide support to women of childbearing age. BSE needs to be done routinely by every woman of childbearing age, even though they do not find any breast problems, as an early detection of breast cancer. Future study can identify the relationship between health facility factors and the role of health workers in breast cancer prevention behavior.

Conflict Of Interest

The authors declare absence of conflict of interest

Acknowledgment

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